

Amendments to the Claims:

Claims 1-15 (not amended)

Please add the following new claims:

16. (New) A method for controlling operation of an internal combustion engine,
wherein the internal combustion engine comprises:
at least one cylinder,
a piston reciprocally movable in the at least one cylinder,
at least one intake conduit in communication with the cylinder,
an intake valve arranged and constructed to open and close the intake conduit
as a function of crankshaft rotation,
means for generating signals representative of engine performance demands,
and
a charge control valve movably disposed in the at least one intake conduit
upstream of the intake valve, the charge control valve being arranged and constructed
to open and close the intake conduit based upon the signals from the means for
generating signals representative of engine performance demands,
the method comprising:
closing the charge control valve increasingly ahead of closing the intake valve in
response to signals indicating decreasing engine performance demands, whereby a
reduced pressure condition is generated between the charge control valve and the
intake valve, and
opening the charge control valve ahead of opening the intake valve, such that
the charge control valve is opened, while the intake valve is still closed, at a timing to
generate a pressure wave by the reduced pressure condition between the charge
control valve and the intake valve, which pressure wave is reflected by an open end of
the intake conduit, and such that the pressure wave arrives at the intake valve
substantially contemporaneously with the opening of the intake valve.

17. (New) A method as in claim 16, wherein the internal combustion engine further comprises means for increasing an amount of fresh charge supplied via the intake conduit to the cylinder, the method further comprising opening and closing the charge control valve based, at least in part, upon one of charging volume and charging pressure.

18. (New) A method as in claim 16, wherein the internal combustion engine further comprises:

at least first and second exhaust gas turbo chargers, each comprising an exhaust turbine connected in series with a charger turbine and a divider valve disposed upstream of the first exhaust turbine,
the method further comprising selectively directing exhaust gas directly to the charger turbines in dependence upon operational parameters of the internal combustion engine.

19. (New) A method as in claim 18, wherein each exhaust gas turbine comprises a variable intake geometry and the method further comprises controlling the variable intake geometry as a function of the operational parameters of the internal combustion engine.

20. (New) A method as in claim 16, wherein the internal combustion engine further comprises an electric step motor receiving the signals from the means for generating signals representative of engine performance demand and being arranged and constructed to control the opening and closing of the charge control valve based upon said signals.

21. (New) A method as in claim 20, wherein the charge control valve comprises a rotary valve.

22. (New) A method as in claim 21, wherein the rotary valve and the electric step motor are interconnected by a torsion-stiff, but flexible bending connection.

23. (New) A method as in claim 16, wherein the charge control valve comprises a linearly movable valve.

24. (New) An apparatus suitable for controlling operation of an internal combustion engine, wherein the internal combustion engine comprises:

at least one cylinder having at least one intake opening and at least one exhaust opening,

a piston reciprocally movable in the at least one cylinder,

an intake valve arranged and constructed to open and close the intake opening as a function of crankshaft rotation,

means for generating signals representative of engine performance demands, wherein the claimed apparatus comprises:

at least one intake conduit in communication with the at least one intake opening, a charge control valve movably disposed in the at least one intake conduit upstream of the intake valve,

a motor being arranged and constructed to open and close the charge control valve, and

a controller arranged and constructed to receive the signals from the means for generating signals representative of engine performance demands and being arranged and constructed to supply charge control valve signals to the motor, such that:

the charge control valve is closed increasingly ahead of closing of the intake valve in response to signals indicating decreasing engine performance demands, whereby a reduced pressure condition is generated between the charge control valve and the intake valve, and

the charge control valve is opened ahead of opening of the intake valve, such that the charge control valve is opened, while the intake valve is still closed, at a timing to generate a pressure wave by the reduced pressure condition between the charge

control valve and the intake valve, which pressure wave is reflected by an open end of the intake conduit, and such that the pressure wave arrives at the intake valve substantially contemporaneously with the opening of the intake valve.

25. (New) An apparatus as in claim 24, wherein the internal combustion engine further comprises means for increasing an amount of fresh charge supplied via the intake conduit to the cylinder, wherein the controller is further arranged and constructed to open and close the charge control valve based, at least in part, upon one of charging volume and charging pressure.

26. (New) An apparatus as in claim 24, wherein the internal combustion engine further comprises:

at least first and second exhaust gas turbo chargers, each comprising an exhaust turbine connected in series with a charger turbine, and

a divider valve disposed upstream of the first exhaust turbine, wherein the divider valve is arranged and constructed to selectively direct exhaust gas directly to the charger turbines in dependence upon operational parameters of the internal combustion engine.

27. (New) An apparatus as in claim 26, wherein each exhaust gas turbine comprises a variable intake geometry arranged and constructed to be controlled as a function of the operational parameters of the internal combustion engine.

28. (New) An apparatus in claim 24, wherein the motor is an electric step motor.

29. (New) An apparatus as in claim 28, wherein the charge control valve comprises a rotary valve.

30. (New) An apparatus as in claim 29, wherein the rotary valve and the electric step motor are interconnected by a torsion-stiff, but flexible bending connection.

31. (New) An apparatus as in claim 24, wherein the charge control valve comprises a linearly movable valve.